

## **NON-TECHNICAL ABSTRACT**

### **A Pilot Study Evaluating the Migratory Patterns of Immature and *In vitro* Matured Dendritic Cells Transfected with RNA Encoding PSA in Patients with Metastatic Prostate Cancer**

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The purpose of this research study is to follow the movement of immature and mature dendritic cells after being injected under the skin. We have completed a study that shows immature dendritic cells mixed prostate specific antigen [(PSA) producing ribonucleic acid (RNA)] are able to stimulate the body's immune responses. These stimulated immune responses may interfere with the growth of prostate cancer. Recent studies suggest that dendritic cells activated by a process called maturation (referred to as matured dendritic cells) could make a stronger immune response because of their ability to move to lymph nodes where the immune system is stimulated. In this study we would like to see if matured dendritic cells mixed with PSA RNA show improved movement when compared to the immature dendritic cells used in our previous vaccine study. It is possible to follow the movement of dendritic cells by adding a radioactive label called Indium-111 and then follow their movement by detecting the radioactivity with a special camera. If we would see improved movement of the mature dendritic cells, it would be possible to perform a clinical trial treating patients with prostate cancer using a potentially better vaccine.